THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Keresman, III, et al.

Application No.: 10/044,630

Filed: January 11, 2002

Examiner: Christina O. Sherr

Docket No.: PRAZ 2 00011

For: **DYNAMIC NUMBER AUTHENTICATION FOR CREDIT/DEBIT CARDS**

BRIEF ON APPEAL

Appeal from Group 3621

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I.   REAL PARTY IN INTEREST

The real party in interest for this appeal and the present application is CardinalCommerce Corporation, by way of an Assignment recorded in the U.S. Patent and Trademark Office at Reel 013309, Frame 0500.

II.   RELATED APPEALS AND INTERFERENCES

There are no prior or pending appeals, interferences or judicial proceedings, known to Appellant, Appellant's representative, or the Assignee, that may be related to, or which will directly affect or be directly affected by or have a bearing upon the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-25 are on appeal.

Claims 1-25 are pending.

Claims 1-25 are rejected.

IV. STATUS OF AMENDMENTS

No Amendment After Final Rejection has been filed.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A. *Claim 1*

The invention of independent claim 1 is directed to token (e.g., see element **10** in FIGURES **1A** and **1B**, see also, e.g., paragraphs [0027] and [0033]) for conducting commercial transactions. The token includes:

a power source (e.g., see element **12** in FIGURE **1A**, see also paragraphs [0027] and [0053]);

a unique set of predetermined random numbers, said set including at least a plurality of numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

software for selecting and dispensing an unused number from the set of random numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in an external authentication system (e.g., see elements **30** and **32** in FIGURE **1B**, see also paragraph [0033]);

a display device for displaying the dispensed random number (e.g., see element **14** in FIGURE **1A**, see also paragraphs [0027] and [0028]); and,

a plurality of buttons wherein each button is assigned a unique account identifier number representing a type of account for conducting a commercial transaction, wherein each selection of a button causes the software to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device (e.g., see elements **16** in

FIGURE **1A**, see also paragraphs [0027], et seq., additionally see FIGURE **3** generally along with paragraphs [0036], et seq.).

B. *Claim 10*

The invention of independent claim 10 is directed to system for conducting commercial transactions comprising:

a power source (e.g., see element **12** in FIGURE **1A**, see also paragraphs [0027] and [0053]);

a unique set of predetermined random numbers, said set including at least a plurality of numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

software for selecting and dispensing an unused number from the set of random numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in an external authentication system (e.g., see elements **30** and **32** in FIGURE **1B**, see also paragraph [0033]);

a display device for displaying the dispensed random number (e.g., see element **14** in FIGURE **1A**, see also paragraphs [0027] and [0028]);

at least one of a keypad and a keyboard (e.g., see elements **16** in FIGURE **1A**, see also paragraphs [0027], et seq.); and,

a plurality of virtual buttons (e.g., see furthermore paragraph [0030]) wherein each virtual button is assigned a unique account identifier number representing a type of account for conducting a commercial transaction, wherein each selection of a virtual

button causes the software to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device, and wherein selection of a virtual button is performed by one of selecting a representation of a button on the display device by means of a pointing device and selecting a key configured to represent a respective virtual button (e.g., see additionally FIGURE **3** generally along with paragraphs [0036], et seq.).

C.   *Claim 15*

The invention of independent claim 15 is directed to method for conducting commercial transactions (e.g., see generally FIGURE **4** and paragraphs [0039], et seq.) comprising the steps of:

providing an authentication system (e.g., see element **34** in FIGURE **2**, and see also paragraphs [0034] and [0039], et seq.);

providing a transaction device (e.g., see token **10** in FIGURES **1A** and **1B**, see also, e.g., paragraphs [0027] and [0033]) including:

a power source (e.g., see element **12** in FIGURE **1A**, see also paragraphs [0027] and [0053]);

a unique set of predetermined random numbers, said set including at least a plurality of numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

software for selecting and dispensing an unused number from the set of random numbers (e.g., see paragraphs [0022], et seq. and more specifically paragraph [0033]);

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in the external authentication system (e.g., see elements **30** and **32** in FIGURE **1B**, see also paragraph [0033]);

a display device for displaying the dispensed random number (e.g., see element **14** in FIGURE **1A**, see also paragraphs [0027] and [0028]); and,

an account selection means (e.g., see buttons **16** in FIGURE **1A**, see also paragraphs [0027], et seq.);

selecting (e.g., see step **66** in FIGURE **4**) via the account selection means a unique account identifier number representing a type of account for conducting a commercial transaction (e.g., see paragraphs [0027], [0028] and [0039], et seq.);

invoking the software, for each activation of the selection means, to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device (e.g., see step **66** in FIGURE **4**, and more generally FIGURE **3** along with paragraphs [0039], et seq., and paragraphs [0027], et seq.); and,

providing the authentication system with the account identifier and the dispensed number (e.g., see step **68** in FIGURE **4**, and paragraph [0039]), wherein the authentication system:

compares the dispensed number to the next unused number stored on the authentication system (e.g., see step **70** in FIGURE **4**, and see paragraph [0039]); and,

accepts the transaction if the dispensed number matches the next unused number stored on the authentication system or rejects the transaction if

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the dispensed number does not match the next unused number stored on the authentication system (e.g., see steps **72**, et seq. in FIGURE **4**, and see paragraph [0040]).

D.   _Claim 21_

The invention of independent claim 21 is directed to a code dispensing device (e.g., see token **10** in FIGURES **1A** and **1B**, see also, e.g., paragraphs [0027] and [0033]) comprising:

storage means (e.g., see memory **32** in FIGURE **1B**, see also paragraph [0033]) for storing a set of codes simultaneously, said set including at least a plurality of codes;

signaling means (e.g., see buttons **16** in FIGURE **1A**, see also paragraphs [0027], et seq.) for signaling the dispensing device to dispense one of the codes from the set upon each activation of the signaling means; and,

display means (e.g., see display **14** in FIGURE **1A**, see also paragraphs [0027] and [0028]) for displaying the dispensed codes.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

The following grounds of rejection are presented for review:

Claims 1-25 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,657,388 to Weiss ("Weiss").

VII. ARGUMENT

A. *The Rejection of Independent Claims 1, 10, 15 and 21 is Erroneous*

The present application is directed to a number and/or code dispenser or token. As disclosed, the numbers or codes dispensed are suitable for use in authentication applications, e.g., associated with commercial and/or other types of transactions. In one exemplary embodiment, the numbers/codes dispensed are "one-time use" numbers/codes. That is to say, after a dispensed number/code is used once, it is no longer valid. Significantly, in exemplary embodiments, the dispenser or token contains and/or stores a plurality of predetermined numbers/codes which are sequentially dispensed on demand. Suitably, the set of numbers/codes are generated by an external device and loaded onto the token or dispenser. In this manner, the token/dispenser is relieved of the computational burden of having to generate each number/code that is dispensed.

To use a suitable analogy, selected embodiments of the token or dispenser disclosed in the present application are akin to the PEZ® candy dispenser. That is to say, the numbers or codes are like the candy, both are pre-existing elements that are load into and/or otherwise merely contained by their respective dispensers. The PEZ® dispenser does not make the candy, and the currently disclosed dispenser/token does not generate the numbers/codes. Rather, the currently disclosed dispenser/token and the PEZ® dispenser both merely store the candy and/or numbers/codes and in turn output their respective contents on demand.

Conversely, Weiss is directed to a token which does not store or otherwise contain a plurality of numbers or codes for dispensing. In fact, the explicit preference of

Weiss is for the token **12** to "store as little information as possible." Col. 3, lines 29-30. This is opposed to the present application in which a plurality of numbers/codes are stored in the token/dispenser. In fact, this statement in Weiss teaches away from the present application.

In contrast to the present application, Weiss teaches a token **12** having a memory **18**, which in its simplest case "would contain only a secret user code **22**." Col. 4, lines 33-34. However, in some embodiments, the memory **18** may also "store a public code **24**, an algorithm **26** and/or a time-varying value **28**." Col. 4, lines 35-37. In accordance with the teachings of Weiss, the token **12** uses the algorithm and/or other stored elements to generate each number it outputs at the time it is requested. Alternately, an external token processor **14** generates the number each time it is requested. In any event, the token **12** does not contain or store a plurality of predetermined numbers or codes that are dispensed on demand. Note, neither the secret user code **22** nor the time-varying value **28** nor the public code **24** are ever dispensed (i.e., displayed or otherwise perceivably output). Rather, they are merely factors used to generate the nonpredictable code that is ultimately used for authorization or otherwise output.

To return to the prior analogy, the token **12** of Weiss does not function like a PEZ® dispenser. That is to say, it does not store a plurality of elements (i.e., candy or codes as the case may be) and dispense the stored elements on demand. Rather, the token **12** of Weiss is more akin to a candy maker which makes a new piece of candy each time one is requested, i.e., the token **12** of Weiss generates a new code each time one is requested. In any event, nowhere is it disclosed that the memory **18** of the Weiss token **12** stores a plurality of numbers or codes that are dispensed by the token **12**.

With reference now to specific claims, claims 1, 10 and 15 each call for: a set of predetermined numbers, the set including at least a plurality of numbers; a memory for storing the set of numbers; software for selecting and dispensing an unused number from the set; and, a display for displaying the dispensed number. Weiss fails to disclose the foregoing. More specifically, the memory **18** in the token **12** of Weiss does not store a plurality of numbers as claimed which are dispensed from and/or displayed by the token **12**. Accordingly, it is respectfully submitted that claims 1, 10 and 15 distinguish patentably over the prior art, along with claims 2-9, 11-14 and 16-20 that depend therefrom.

Claim 21 is directed to a code dispensing device including storage means for storing a set of codes simultaneously, the set including at least a plurality of codes. A signaling means signals the dispensing device to dispense one of the codes from the set upon each activation of the signaling means, and a display means displays the dispensed codes. Again, Weiss fails to disclose such a code dispensing device. In particular, the memory **18** in the token **12** of Weiss does not simultaneously store a plurality of codes as claimed which are in turn dispensed from and/or displayed by the token **12**. Accordingly, it is respectfully submitted that claim 21 distinguishes patentably over the prior art, along with claims 22-25 that depend therefrom.

In the final Office Action, the Examiner references col. 3, lines 5-10 to support the allegation that Weiss discloses a token which stores a plurality of dispensed numbers or codes. However, the Examiner is misreading and/or misinterpreting the cited passage.

In particular, the Office Action correctly quotes Weiss as follows:

"A time-varying, event varying, use varying or the like value (hereinafter "time-varying value" or "one-time code") produced or stored at the token

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processor may also be utilized in generating the nonpredictable coded response."
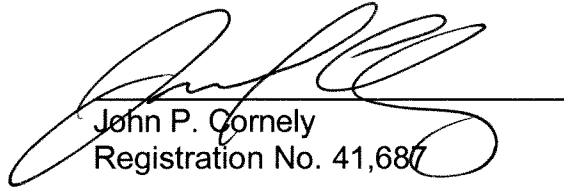
While correctly quoted, the passage is nevertheless erroneously interpreted and/or applied to the present claims. Importantly, the passage refers to "A [singular] time-varying, event varying or the like value ... produced or stored at the token processor ... ." The claims clearly recite a set of numbers or codes which expressly include a plurality of numbers or codes (i.e., more than one). Accordingly, the singular value referred to in the passage cannot be fairly equated with the claimed set of numbers or codes.

Moreover, in accordance with the claims, the plurality of numbers or codes in the claimed set are ultimately dispensed or displayed, e.g., by the respective device or token. On the contrary, the "time-varying, event varying, use varying or the like value" referred to in the cited passage is not a dispensed number or code, i.e., it is never displayed or output from the token **12**. Rather, as expressly stated in the cited passage, the aforementioned value is merely utilized to generate the "nonpredictable code" which is ultimately dispensed or output. Notably, Weiss does not teach storing a plurality of nonpredictable numbers or codes that are ultimately dispensed or output from the token **12**.

CONCLUSION

For all of the reasons discussed above, it is respectfully submitted that the rejection(s) are in error and that claims 1-25 are in condition for allowance. For all of the above reasons, Appellants respectfully request this Honorable Board to reverse the rejection(s) of claims 1-25.

Respectfully submitted,

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APPENDICES

VIII. CLAIMS APPENDIX

Claims involved in the Appeal are as follows:

1. (Previously Presented) A token for conducting commercial transactions comprising:

a power source;

a unique set of predetermined random numbers, said set including at least a plurality of numbers;

software for selecting and dispensing an unused number from the set of random numbers;

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in an external authentication system;

a display device for displaying the dispensed random number; and,

a plurality of buttons wherein each button is assigned a unique account identifier number representing a type of account for conducting a commercial transaction, wherein each selection of a button causes the software to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device.

2. (Original) The token for conducting commercial transactions according to claim 1 wherein the token becomes inoperable when the unique set of random numbers becomes exhausted.

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3.   (Original)   The token for conducting commercial transactions according to claim 1 further including a communications port, wherein the token may be reprogrammed via the communications port with a new set of random numbers by an external system when the unique set of random numbers becomes exhausted.

4.   (Original)   The token for conducting commercial transactions according to claim 1 further including 1 to N predetermined polynomial transformation equations, wherein the 1 to N predetermined polynomial transformation equations operate on each random number to provide 1 to N additional numbers for each of the predetermined random numbers.

5.   (Original)   The token for conducting commercial transactions according to claim 1 further including a magnetic transducer, wherein the software is configured to cause the magnetic transducer to generate magnetic pulses according to the selected button for emulating the conventional magnetic strip of a standard credit/debit card and, wherein the magnetic pulses represent one of the dispensed random number with the unique account identifier and predetermined credit/debit card identification numbers programmed for each of the buttons.

6.   (Original)   The token for conducting commercial transactions according to claim 1 further including a PIN number, wherein the software is configured to request a user to enter the predetermined PIN number each time the token is activated, and wherein the software is configured to not dispense a random number until the correct PIN number has been entered.

7. (Original) The token for conducting commercial transactions according to claim 6, wherein the PIN number is entered by selecting the appropriate buttons, and wherein there are sufficient buttons to represent each digit of the PIN number.

8. (Original) The token for conducting commercial transactions according to claim 6 further including a keypad, wherein the PIN number is entered by selecting appropriate keys on the keypad.

9. (Original) The token for conducting commercial transactions according to claim 1, wherein the power source includes at least one of a battery and a solar cell, and wherein the solar cell may optionally generate sufficient power from interior lighting.

10. (Previously Presented) A system for conducting commercial transactions comprising:

a power source;

a unique set of predetermined random numbers, said set including at least a plurality of numbers;

software for selecting and dispensing an unused number from the set of random numbers;

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in an external authentication system;

a display device for displaying the dispensed random number;

at least one of a keypad and a keyboard; and,

a plurality of virtual buttons wherein each virtual button is assigned a unique account identifier number representing a type of account for conducting a commercial transaction, wherein each selection of a virtual button causes the software to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device, and wherein selection of a virtual button is performed by one of selecting a representation of a button on the display device by means of a pointing device and selecting a key configured to represent a respective virtual button.

11. (Original) The system for conducting commercial transactions according to claim 10 further including a communications port, wherein the system may be reprogrammed via the communications port with a new set of random numbers by an external system when the unique set of random numbers becomes exhausted.

12. (Original) The system for conducting commercial transactions according to claim 11, wherein the communications port may be connected to at least one of the Internet and a cellular network.

13. (Original) The system for conducting commercial transactions according to claim 10 further including 1 to N predetermined polynomial transformation equations, wherein the 1 to N predetermined polynomial transformation equations operate on each random number to provide 1 to N additional numbers for each of the predetermined random numbers.

14. (Original) The system for conducting commercial transactions according to claim 10 further including a PIN number, wherein the software is configured to request a user to enter the predetermined PIN number each time the system is activated, and wherein the software is configured to not dispense a random number until the correct PIN number has been entered.

15. (Previously Presented) A method for conducting commercial transactions comprising the steps of:

provding an authentication system;

providing a transaction device including:

a power source;

a unique set of predetermined random numbers, said set including at least a plurality of numbers;

software for selecting and dispensing an unused number from the set of random numbers;

a memory for storing the software and the set of random numbers, wherein the set of random numbers is identical to a set of numbers stored in the external authentication system;

a display device for displaying the dispensed random number; and,

an account selection means;

selecting via the account selection means a unique account identifier number representing a type of account for conducting a commercial transaction;

invoking the software, for each activation of the selection means, to select and dispense a previously unused number from the set of random numbers and display the dispensed number and the unique account identifier in the display device; and,

providing the authentication system with the account identifier and the dispensed number, wherein the authentication system:

compares the dispensed number to the next unused number stored on the authentication system; and,

accepts the transaction if the dispensed number matches the next unused number stored on the authentication system or rejects the transaction if the dispensed number does not match the next unused number stored on the authentication system.

16. (Original) The method for conducting commercial transactions according to claim 15, further including the step of resynchronizing the authentication system with the transaction device after at least one dispensed number is not received by the authentication system.

17. (Original) The method for conducting commercial transactions according to claim 16, wherein the step of resynchronizing the authentication system with the transaction device includes the steps of:

locating and verifying that the dispensed number exists in the set of unused random numbers stored on the authentication system;

requesting a second number to be dispensed from the transaction device;

comparing the second dispensed number to the number in the authentication set of numbers subsequent to the previously located number; and,

allowing the resynchronization if the second dispensed number matches the subsequent authentication system number or rejecting the transaction otherwise.

18.   (Original)   The method for conducting commercial transactions according to claim 15 further including reprogramming the transaction device with a new set of random numbers from an external system when the unique set of random numbers becomes exhausted or on request from a user.

19.   (Original)   The method for conducting commercial transactions according to claim 15 further including providing 1 to N additional numbers for each of the predetermined random numbers by means of 1 to N polynomial transformation equations, wherein the 1 to N predetermined polynomial transformation equations operate on each random number to generate 1 to N additional numbers for each random number.

20.   (Original)   The method for conducting commercial transactions according to claim 15 further including providing a PIN number, wherein the software is configured to request a user to enter the predetermined PIN number each time the transaction device is activated, and wherein the software is configured to not dispense a random number until the correct PIN number has been entered.

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21. (Previously Presented)   A code dispensing device comprising:

storage means for storing a set of codes simultaneously, said set including at least a plurality of codes;

signaling means for signaling the dispensing device to dispense one of the codes from the set upon each activation of the signaling means; and,

display means for displaying the dispensed codes.

22. (Original)   The code dispensing device according to claim 21, further comprising:

a power source for powering the dispensing device.

23. (Original)   The code dispensing device according to claim 22, wherein said power source includes a photo-electric device.

24. (Original)   The code dispensing device according to claim 21, further comprising:

indicator means for indicating to a user of the dispensing device an amount of undispensed codes remaining in the storage means.

25. (Original)   The code dispensing device according to claim 21, wherein each code is only dispensed once.

IX.   EVIDENCE APPENDIX

Appellant, Appellant's representative, and/or the Assignee are aware of no evidence submitted under 37 CFR §§1.130, 1.1331, or 1.132 or of any other evidence entered by the Examiner and relied upon by the Appellant in the present appeal. Accordingly, the remainder of this page has been intentionally left blank.

X. RELATED PROCEEDINGS APPENDIX

Appellant, Appellant's representative, and/or the Assignee are aware of no related proceeding in connection with this matter. Accordingly, the remainder of this page has been intentionally left blank.